Journal of Education.

NEW ENGLAND and NATIONAL.

SUPPLEMENT.

Vol. XXXIV. { Number 14. Whole No. 839. } Weekly. BOSTON & CHICAGO, THURSDAY, OCT. 8, 1891. Price, { $2.50 per yr. in advance. Single copies, 6 cents.

UNIFORM EXAMINATION QUESTIONS FOR COMMISSIONERS' CERTIFICATES.

NEW YORK STATE DEPARTMENT OF PUBLIC INSTRUCTION.

THE FIRST GRADE CERTIFICATES.

[August 18, 1891.]

ARITHMETIC.

2. Reduce 108,459 square inches to a compound number expressed in square rods, square yards, square feet, and square inches.

3. *Similar surfaces are to each other as the squares of their like dimensions* A circle 6 feet 3 inches contains an area how many times as great as that of a circle 1 foot 3 inches in diameter?

4. Separate the number 707,281 into four equal factors.

5. Sold half of my interest in a mine for five-eighths of what my entire interest cost me. What was my loss per cent. by the transaction?

6. If stock bought at 85 is sold for 75, what is the per cent of loss (*a*) on the par value of the stock; (*b*) on the investment?

7. The estimates voted by a certain village were as follows: For streets, $6,000; for lighting, $2,700; for building and repairs, $4,150; for police fund, $3,800; for salaries, $2,200; for contingent fund, $2,000; total assessment was $4,180,500. What was the rate of taxation on $1,000 of valuation?

8. *Exact* interest at the rate of 6 per cent. per annum, for a certain term, on $511 is $4.62. If the term began Aug. 9, 1891, when does it end?

9. What is the cost of flooring a room 18 feet 6 inches long, and 12 feet 3 inches wide, at $8.25 per square (*i. e.*, 100 square feet)?

10. A, B, and C rented a pasture together, and A pastured four horses 12 weeks, B seven horses 8 weeks, and C six horses 11 weeks. What part of the entire rental should each pay?

GEOGRAPHY.

1. How does continental climate differ from insular climate in the same latitude?

2. (*a*) In what zone does the greater portion of North America lie? (*b*) In what zone does the greater part of Australia lie?

3. Locate (*a*) Vancouver Island; (*b*) the Bahama Islands.

4. Name the three principal inland centers of trade in the United States.

5. Name the principal river of Alaska, the general direction in which it flows, and into what it empties.

6. (*a*) Name and describe the largest tributary of the Hudson. (*b*) What other river drains a large portion of central New York? (*c*) Into what does this drainage finally empty?

7. Locate the three highland regions of South America.

8. Through what countries of South America does the equator pass?

9. Name a prominent seaport, other than the capital, of (*a*) Scotland; (*b*) France; (*c*) Germany; (*d*) Russia; (*e*) Holland.

10. Name the chief articles of import from (*a*) Japan; (*b*) China; (*c*) Spain; (*d*) Cuba; (*e*) Canada.

DRAWING.

NOTE.—The word *view* as used in this paper refers to facts of form and position.

1. Name and illustrate the three relations which lines bear to each other as to direction.

2. How many axes of symmetry has a circle?

3. A sphere rests on the center of the top face of a cube having the same diameter as the sphere. Draw top view and front view of the combination.

4. Make a working drawing of a square prism. Indicate dimensions.

5. Draw top view and front view of a cube turned at an angle of 45°,—*i. e.*, with two side faces equally in view.

6. Draw the appearance of the same cube, in front and above the eye.

7. How does an oblique view of any plane figure differ from its true shape?

8. Hold a circular disk vertically with edge toward you. Draw its appearance (*a*) a little to the left of the eye; (*b*) directly opposite the eye.

9. Mention an important principle underlying good decoration.

10. Represent a leaf, (*a*) in its natural form; (*b*) conventionalized.

COMPOSITION.

Write a composition on one of the following subjects; A Moonlight Ride; The Tramp; Follies of Fashion; Learning to Cook. Pay particular attention to: 1. The matter, —*i. e.*, the thoughts expressed; 2. The correctness and propriety of the language used; 3. The orthography, punctuation, division into paragraphs, use of capitals, and general appearance.

GRAMMAR.

1 Nor Fame I slight, nor for her favor call;
2 She comes unlook'd for, if she comes at all;
3 But, if the purchase costs so dear a price
4 As soothing folly, or exalting vice,—
5 Oh! if the muse must flatter lawless sway,
6 And follow still where fortune leads the way;
7 Or if no basis bear my rising name,
8 But the fallen ruins of another's fame;
9 Then, teach me, Heaven, to scorn the guilty bays,
10 Drive from my breast that wreathed lust of praise;
11 Unblemish'd let me live, or die unknown;
12 Oh, grant an honest fame, or grant me none.

—*Alexander Pope.*

The first seven questions refer to the above selection.

NOTES.—1. A combination of subject and predicate is called a clause. Clauses are principal or subordinate. 2. Subordinate clauses include (*a*) subject clauses; (*b*) objective clauses; (*c*) adjective clauses; (*d*) adverbial clauses. 3. In naming a clause, include only its unmodified subject and unmodified predicate. 4. A preposition with its object is called a phrase. 5. In naming a phrase, give only the preposition and its unmodified object. 6. A modifier may be a word, phrase, or clause. 7. An object of a transitive verb is classed as a modifier of that verb. 8. Only eight parts of speech are recognized,—the articles *the* and *a* forming a subdivision of adjectives and participles being one of the forms of verbs. 9. Infinitives are classed as modes of the verb. 10. In parsing a noun or pronoun, observe the following order: Class, person, number, gender, case. Give the reason for case. In parsing a relative pronoun, state the agreement with its antecedent. 11. In giving the syntax of a noun or pronoun, give only the case and the reason for it. 12. Treat verbs as divided into two classes only; viz., transitive and intransitive; a transitive verb may be used in the active or passive voice. 13. In parsing a verb, observe the following order: Principal parts, regular or irregular, transitive or intransitive, voice, mode, tense, person, number, agreement. Give the special use of an infinitive or a participle after tense.

1. Select and classify the clauses that directly modify *teach*.

2. Select three verbal adjectives.

3. Give syntax of (*a*) *vice* (line 4); (*b*) *ruins* (line 8); (*c*) *Heaven* (line 9).

4. Classify as parts of speech (*a*) *nor* (line 1); (*b*) *for* (line 2); (*c*) *as* (line 4); (*d*) *Oh* (line 5); (*e*) *unknown* (line 11).

5. Give the mode of each of the following verbs: (*a*) *Follow* (line 6); (*b*) *bear* (line 7); (*c*) *teach* (line 9); (*d*) *let* (line 11); (*e*) *die* (line 11).

6. Select two adjectives used like nouns (adjective pronouns), and give the case of each.

7. Give syntax of (*a*) *exalting* (line 4); (*b*) *lust* (line 10).

8. Give the law of formation of the present perfect tense, common form. Give an example.

9. Write a sentence containing a noun used (*a*) as the subject of an infinitive; (*b*) as object of an infinitive.

10. By sentences illustrate the use of a collective noun (*a*) in the singular; (*b*) in the plural.

PHYSIOLOGY AND HYGIENE.

1. Name and locate four of the main centers of the cerebro-spinal nervous system.

2. Locate the semilunar valves. What is their office?

3. Arrange the following articles of food under the two headings: *Tissue producing*, and *heat and fat producing*, having reference to the predominating quality of each article: (*a*) lean meat, (*b*) eggs, (*c*) wheat flour, (*d*) rice, (*e*) potatoes, (*f*) sugar, (*g*) beans, (*h*) corn starch, (*i*) butter, (*j*) cheese.

4. In which of the coats of the stomach is the gastric juice secreted? In which coat is found the tissue that moves the walls of the stomach during gastric digestion?

5. What is a sensory nerve? What is a retina?

6. Is it better to have the windows of a schoolroom on the right of the pupils, or on the left? In front or in the rear? Give reasons for your answers.

7. Name three sets of bones, an important use of which is the protection of organs. What organs are protected by each set?

8. What is the office of connective tissue? Illustrate your answer by showing its office in some particular organ or part of the body.

9. The pulse is a wave of increased pressure started by the *ventricular systole* and radiating through the *arterial* system. Explain the meaning of the italicized words.

10. To which of the three coats of the eye, outer, inner, or middle, do these parts belong, respectively: (*a*) the iris; (*b*) the retina; (*c*) the ciliary processes; (*d*) the cornea; (*e*) the white of the eye?

CURRENT TOPICS.

1. What is the next legal holiday in this state?

2. What eminent Canadian statesman died recently, and what official position did he occupy at the time of his death?

3. Name (*a*) all surviving ex-presidents of the United States; (*b*) all surviving ex-vice-presidents of the United States.

4. In what South American republic is a revolt against the government now in progress?

5. What caused the great mining trouble in Tennessee last month?

6. Mention state officers to be elected next November.

7. What caused the Salton lake, or the lake in the desert?

8. What ex-vice-president of the United States died recently?

9. With what two foreign governments have reciprocity treaties recently been proclaimed by President Harrison?

10. Name three prominent American poets (living).

AMERICAN HISTORY.

1. For what purpose did Lord Baltimore found a colony in America?

2. Name four states of the Union which were first settled by the English.

3. What was the first legislative body that ever assembled in America?

4. How did the invention of the cotton gin affect negro slavery in the United States?

5. Mention one provision of the Compromise Bill of 1850 known as the Omnibus Bill.

6. Under what circumstances was West Virginia admitted to the Union?

7. What lead to the impeachment of President Johnson?

8. Mention three great naval engagements of the civil war, and name the officers commanding on the Union side.

9. Give an account of the laying of the first Atlantic cable.

10. State something of interest as to Horace Greeley, Thurlow Weed, and James Gordon Bennett.

ANSWERS.

NOTE.—It will be seen that the answers are, in many cases, merely suggestive. Examiners will not be confined to the precise form or substance except where exact answers are required.

ARITHMETIC.

2. 2 sq. rd.; 23 sq. yd.; 1 sq. ft.; 99 sq. in. 3. 25 times the area. 4. $29 \times 29 \times 29 \times 29 = 707{,}281$. 5. 25 per cent. 6. (*a*) 10 per cent.; (*b*) $11\frac{13}{17}$ per cent. 7. $4.987 +. 8. October 3, 1891. 9. $18.70. 10. A should pay $\frac{24}{85}$; B, $\frac{28}{85}$; C, $\frac{33}{85}$.

GEOGRAPHY.

1. Continental climate is subject to great extremes of temperature; insular climate is more uniform in temperature.

2. (*a*) North Temperate Zone; (*b*) South Temperate Zone.

3. (*a*) Off the southwest coast of British Columbia; (*b*) off the southeast coast of Florida.

4. Chicago, Cincinnati, St. Louis.

5. Yukon river; North and west; Pacific ocean.

6. (*a*) The Mohawk river rises near the central part of New York and flows east into the Hudson; (*b*) Oswego; (*c*) Gulf of St. Lawrence. (Atlantic ocean allowed.)

7. The cordillera of the Andes extends north and south in the western part. The Brazilian plateau lies in eastern part. The plateau of Guiana lies in the northern part.

8. Brazil; United States of Colombia; Ecuador.

9. Ex. (*a*) Glasgow; (*b*) Bordeaux; (*c*) Hamburg; (*d*) Riga; (*e*) Amsterdam.

10. (*a*) Silk, tea, rice; (*b*) tea, silk, sugar; (*c*) food supplies, raw materials for manufacture, cork; (*d*) sugar, tobacco, coffee; (*e*) lumber, wheat, cattle, and other domestic animals.

DRAWING.

1. Parallel, perpendicular, and oblique.

9. Fitness to purpose, or the ornamentation of an object must be subordinate to the purpose for which the object is made.

10. Answer cannot well be shown.

GRAMMAR.

1. The adverbial clauses, *If purchase costs; If muse must flatter and follow; If basis bear.*

2. *Rising, fallen, wreathed.*

3. (*a*) *Vice* is the object of *exalting* and is in the objective case; (*b*) *Ruins* is the object of the preposition *but*, and is in the objective case; (*c*) *Heaven* is independent by direct address.

4 (*a*) Conjunction; (*b*) adverb; (*c*) conjunction; (*d*) interjection; (*e*) adjective.

5. (*a*) Potential; (*b*) subjunctive; (*c*) imperative; (*d*) imperative; (*e*) infinitive.

6. (*a*) *Another's* is in the possessive case; (*b*) *None* is in the objective case.

7. (*a*) *Exalting* is the subject of a verb not expressed, and is in the nominative case; (*b*) *Lust* is the object of *drive*, and is in the objective case.

8. The present perfect tense is formed by prefixing the present tense of *have* to the past participle of the leading verb. Ex. I have come.

9. Ex. (*a*) He desired the man to go; (*b*) he wishes to have the book.

10. Ex. (*a*) The class was dismissed; (*b*) the majority are willing to adjourn.

PHYSIOLOGY AND HYGIENE,

1. The cerebrum, in the upper portion of the cranium, the cerebellum, in the lower posterior portion of the cranium, the medulla, at the base of the skull, the spinal cord in the back bone.

2. They are located at the origin of the great arteries. They prevent the blood from flowing back from the arteries into the ventricles.

3. Tissue producing, — a, b, g, k. Heat and fat producing, — c, d, e, f, h, i.

4. The inner coat, — or mucous membrane. The muscular coat.

5. A nerve that transmits nervous impulses inward to the great centers, viz., spinal cord and brain. A retina is an expansion of a sensory nerve called the optic nerve, which is sensitive to light.

6. On the left, because the light admitted from that direction will not be obstructed by the hand while the pupil is writing. In the rear, because the light from the front would enter the eyes of the pupils and irritate them, without illuminating the objects they want to see.

7. The cranial bones protect the brain. The bones of the thorax protect the heart and lungs. The bones partly enclosing the abdominal cavity protect the digestive organs and great glands, such as the liver, the pancreas, the kidneys, also the organs of reproduction.

8. Connective tissue binds together firmly, in various ways, the elements and masses of all the soft parts of the body.

9. *Ventricular* means pertaining to the ventricles. *Systole* means contraction, as of the heart. *Arterial* means pertaining to the arteries.

10. The iris (*a*) the middle coat; the retina (*b*) the inner coat; the ciliary processes (*c*) the middle coat; the cornea (*d*) the outer coat; the white of the eye (*e*) the outer coat.

CURRENT TOPICS.

1. Labor day, Monday, Sept. 7.
2. John Alexander MacDonald, Premier of Canada.
3. (*a*) Rutherford B. Hayes, Grover Cleveland; (*b*) there are none. 4 Chile.
5. The attempt to employ convict labor in the mines.
6. Governor, Lieutenant Governor, Secretary of State, Comptroller, State Treasurer, Attorney-General, and State Engineer and Surveyor.
7. The Colorado river breaking through its banks.
8. Hannibal Hamlin.
9. Spain, San Domingo. 10. Answers may differ.

AMERICAN HISTORY.

1. To secure a refuge for the Catholics who were then persecuted in England.
2. New Hampshire, Massachusetts, Connecticut, Rhode Island, Maryland, Georgia. (Any four of the above.)
3. House of Burgesses in Virginia. 1619.
4. It made slaves vastly more profitable to their owners, and so increased the number of slaves held.
5. Admission of California as a free state; territories of Utah and New Mexico to be formed without any provision in regard to slavery; Texas to be paid $10,000,000 to give up its claim on New Mexico; slave trade to be prohibited in the District of Columbia; or the Enactment of the Fugitive Slave Law.
6. The western counties of Virginia refused to agree to secession, chose a legislation of their own, and were admitted as a new state in 1863.
7. (*a*) Differences of opinion between Johnson and Congress as to the proper policy to pursue in the work of reconstruction, Congress claiming the sole right to admit or refuse admission to the representatives of the states which had been in rebellion. (*b*) Refusal of Johnson to obey laws which Congress had passed over his veto, notably the "Tenure of Office Act."
8. Attack on Forts Henry and Donelson, Com. Foote. Battle between Monitor and Merrimac, Lieut. Worden Capture of New Orleans, Farragut. Expedition against Mobile, Farragut. Battle between the Kearsarge and Alabama, Capt. Winslow. (Any three.)
9. Answers will vary. 10. Answers will vary.

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